Remarks

Applicants thank the Examiner for the interview on June 11, 2003. The substance of the interview is summarized by the remarks below.

Claims 1, 2, and 8 have been amended to more particularly point out the nature of applicants claimed invention.

Please cancel claim 3.

Please add new claims 9-18. Support for the additional claims can be found, for example, at page 4, paragraph 15 of the specification as filed. Based on the above amendments and the following remarks, allowance of pending claims 1, 2 and 4 -18 is respectfully requested.

The rejection of claims 1 and 6 - 8 under 35 USC §102(b) over each of Walston et al., US 5,270,123, and Nguyen-Dinh, US 4,935,072 is respectfully traversed. Claims 1 and 6–8 as amended require a nickel-based alloy comprising 3 to 3.7% by weight of tungsten. Neither Walston et al. nor Nguyen-Dinh discloses an alloy having this composition. As a result, neither Walston et al. nor Nguyen-Dinh discloses all of the elements of the claimed invention, and reconsideration and withdrawal of this rejection are respectfully requested.

The rejection of claims 1, 2, and 4–8 under 35 USC §103(a) as being unpatentable over Bornstein et al., WO 93/24683, is also respectfully traversed. The claimed invention recites nickel-based alloys having a weight ratio of tungsten to rhenium of between 1.1 and 1.6. Bornstein et al. discloses nickel-based alloys containing small amounts of magnesium for improved properties. The only mention made of either tungsten or rhenium in Bornstein et al. is in the

recitation of composition ranges. (For example, see Summary of the Invention, and Composition Range table on page 5.) In particular, Bornstein et al. does not disclose or suggest that the weight percentages of tungsten and rhenium should have a ratio of 1.1 to 1.6, as required by the claimed invention. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (MPEP § 2143.01) Bornstein et al. fails to provide such teaching or motivation.

Additionally, Bornstein et al. teaches away from the composition ranges of the claimed invention. (MPEP §2144.05) The Composition Range table on page 5, discloses compositions that are broad enough in scope to overlap the nickel-based alloys of the claimed invention. Given sufficient guidance, the nickel-based alloys of the claimed invention might be derived from this broad disclosure. However, Bornstein et al. fails to provide the necessary guidance. Instead, Bornstein et al. teaches away from the claimed compositions. For example, claim 1 as amended requires a tungsten weight percent of between 3 and 3.7%. In the table on page 5, the bottom of the "Broad" and "Preferred" composition ranges overlap with this requirement. However, the "Most Preferred" composition recites a tungsten weight percent of 4.6 to 7.2%. Also, the specific composition listed after the table discloses a tungsten weight percent of 5.6 to 6.2%. (This latter weight percent range is similar to the tungsten weight

percents in other references cited in the Office Action.) Similarly, the specific composition recited in Bornstein discloses a rhenium weight percent of 2.8 to 3.2%, which is higher than the 2.3 to 2.6% required by claim 2. Based on this teaching away, and the lack of any disclosure of the ratio of tungsten to rhenium required by the claimed invention, Bornstein et al. fails to disclose or suggest the nickel-based alloys of the claimed invention.

Additionally, Applicants note that paragraphs [0011] and [0012] on page 3 of the specification as filed are in a section titled "Background and Summary of Invention." In particular, the statements in paragraph [0011] referred to in the Office Action are statements of Applicants' discovery that controlling the ratio of tungsten to rhenium within a nickel-based alloy can lead to improved properties. Discovery of this ratio is a part of Applicants' claimed invention. Applicants are unaware of any prior art that discloses or suggests this ratio. As a result, the nickel-based alloys of the claimed invention are not the result of optimization of result-effective variables as defined in MPEP §2144.05.

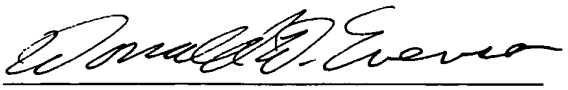
In view of the foregoing amendments and remarks, the application is respectfully submitted to be in condition for allowance, and prompt, favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #225MU/50807).

Respectfully submitted,

June 19, 2003



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